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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/099,892	03/14/2002	Murray Steven Rodgers	50060-00087	5453

7590

03/27/2003

MARSH FISCHMANN & BREYFOGLE LLP
3151 SOUTH VAUGHN WAY, SUITE 411
AURORA, CO 80014

EXAMINER

MULLINS, BURTON S

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 03/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/099,892	Applicant(s) RODGERS, MURRAY STEVEN	
	Examiner Burton S. Mullins	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-87 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-68 is/are allowed.
- 6) ☒ Claim(s) 69-71 and 73-77 is/are rejected.
- 7) ☒ Claim(s) 72 and 78-87 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>n/a</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: On p.18, line 13, the patent number referred to appears to be incorrect. US 6,174,179 is a "Lever Engagement Connector..." to inventor Toshiaki Okabe. Applicant is requested to double-check the number. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 69-71 and 73-77 are rejected under 35 U.S.C. 102(e) as being anticipated by Duhler (US 6,291,922). Duhler teaches a suspension assembly for at least assisting in supporting a first actuation element (moveable comb fingers 365; Fig.5) of a micro-electromechanical system and allowing movement of said first actuation element 365 of a micro-electromechanical system relative to a base substrate 340, wherein said suspension assembly comprises: a longitudinal support beam (part of "actuator" 370) comprising elongate first and second lateral sides (not numbered, Fig.5), and a plurality of first lateral beams 410 extending out from said first and

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second lateral sides of said support beam 370, wherein at least one of said first lateral beams 410 is anchored to said base substrate by anchors 400 (Fig.5). Regarding claims 70 and 76, the beams 410 are perpendicular to support beam 370 (Fig.5). Regarding claims 71 and 73-75, the first and second beams 410 are anchored to the substrate 340 remotely from beam 370 by anchors 400. Regarding claim 77, the beams 410 are parallel with each other (Fig.5).

Allowable Subject Matter

4. Claims 1-68 are allowed. Regarding claims 1 and 24, neither Duhler nor the prior art, alone or in combination, teaches the claimed linkage structures or an intermediate actuator structure interposed between and interconnected with first and second support structures.

5. Claims 72 and 78-87 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Regarding claim 72 and 78, all the beams 410 are anchored in Duhler. Regarding claim 79, the lateral beams 410 in Duhler are not interconnected with an actuation beams forming an actuation assembly. The remainder of the prior art of record, alone or in combination, does not remedy these deficiencies.

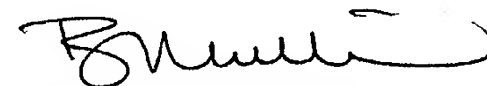
Information Disclosure Statement

6. The information disclosure statement (IDS) submitted on 26 December 2002 has been considered by the examiner.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Clark, Galvin et al. and Seshia et al. disclosed micro-actuator support structures similar to Dhuler.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 305-7063. The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 305-1341 for regular communications and 305-1341 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0956.



Burton S. Mullins
Primary Examiner
Art Unit 2834

bsm
March 25, 2003